

Bluetooth to Serial Adapter

[Standard SPP]

User's Manual

- BT USB to Serial (150M)



>> Up to 150M

- BT USB to Serial (500M)



>> Up to 500M



Bluetooth V2.1+EDR

V4.0B July, 2011

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Welcome

Thanks for your purchase our Bluetooth USB to Serial Adapter. Featuring Bluetooth wireless technology, our Bluetooth USB to Serial Adapter provides the best solution for cable-free Serial connections between your PC or Server & serial devices to industrial and commercial application. It provides transparent serial cable replacement and connects any **Computer** or **Laptop** equipped with a **USB port** to link any Serial-Based devices to a Bluetooth communication wirelessly, such as barcode scanner, cash register, credit card reader, LED display, RFID, sphygmomanometer, film tilter,

Bluetooth USB to Serial Adapter is compliance to Bluetooth V2.1+EDR technology and is able to downward compatible with Bluetooth V1.x..... and improve data transfer rate & capacity. You can connect your computer or server and RS-232 serial devices up to 150 / 500 meters away without cables in your working environments.

※ Bluetooth USB to Serial Adapter is compatible with following - Bluetooth SPP Serial Products:

- **BT to RS-232 (150M)**

Bluetooth to RS-232 Serial Adapter



>> 150 Meter

- **BT to RS-422/485 (150M)**

Bluetooth to RS-485/422 Serial Adapter



>> 150 Meter

- **BT to RS-232 (500M)**

Bluetooth to RS-232 Serial Adapter



>> 500 Meter

- **BT to RS-422/485 (500M)**

Bluetooth to RS-485/422 Serial Adapter



>> 500 Meter

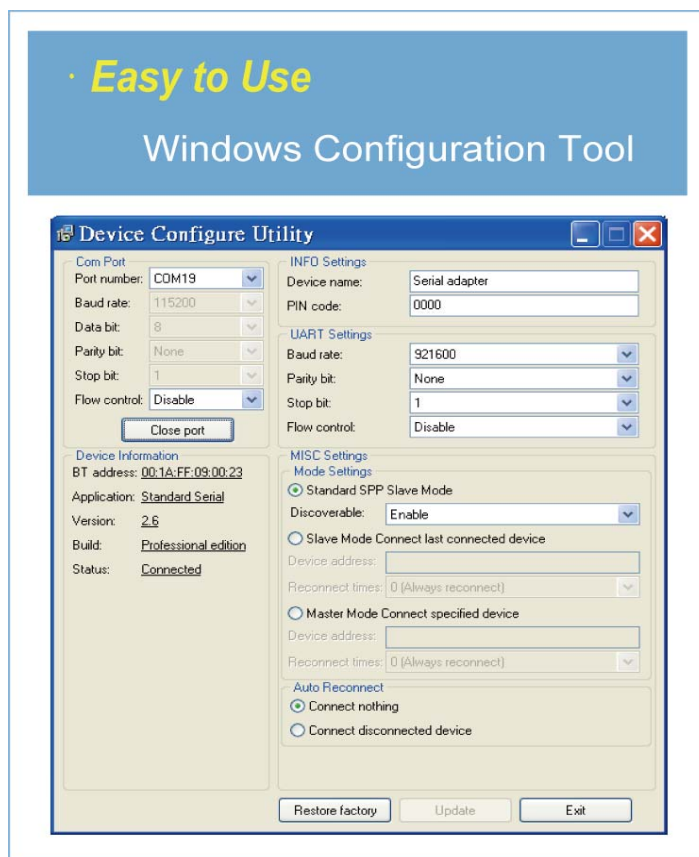
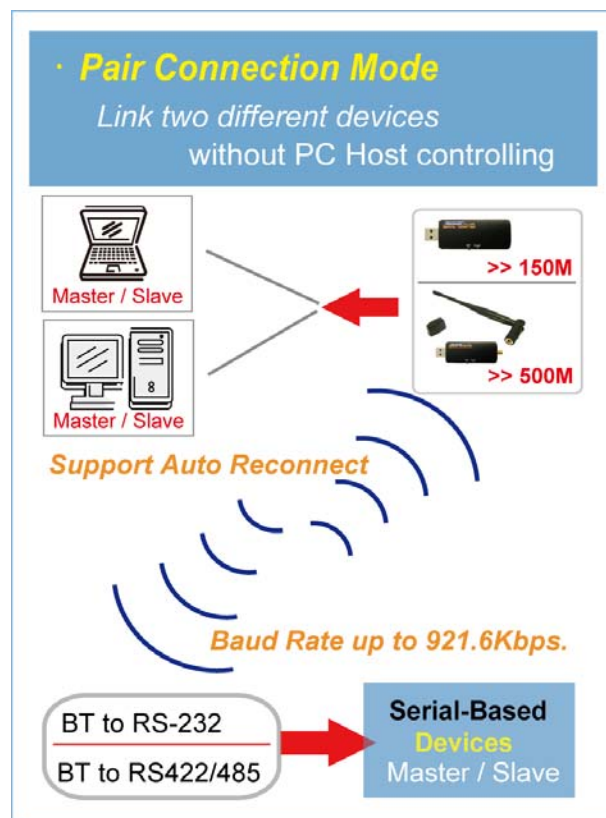
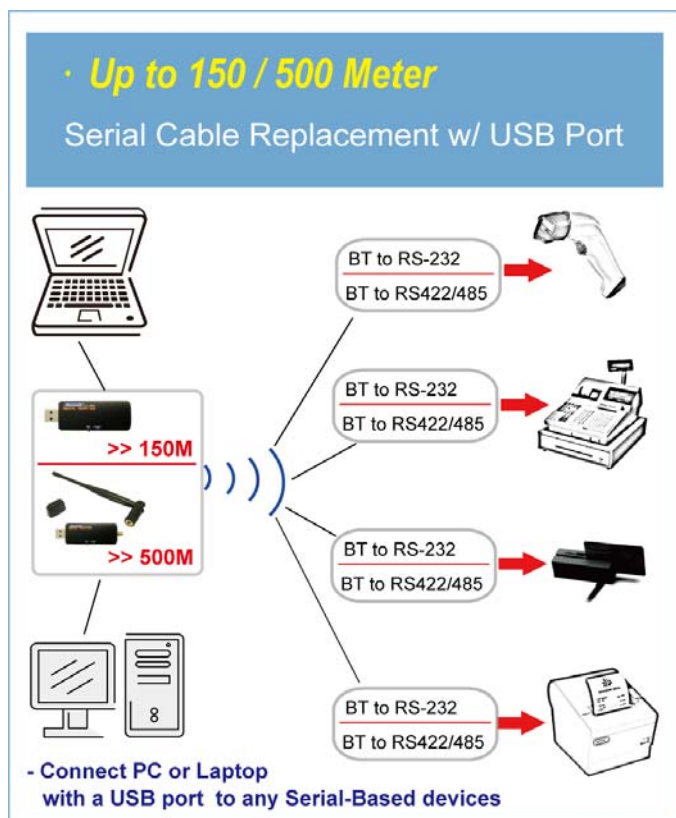
■ Package Contents

- | | |
|--|-----|
| ➤ Bluetooth USB to Serial Adapter | x 1 |
| ➤ USB Cable (Type A Female to Male) | x 1 |
| ➤ User's Manual | x 1 |
| ➤ CD (Device Utility / Driver) | x 1 |
| ➤ 5dBi RP-SMA Antenna (BT USB to Serial – 500M) | x 1 |

■ Feature

- Bluetooth Specification V2.1+EDR
- CSR BC04 Chipset
- Operation Range up to 150/500 Meters.
- Supports Bluetooth Serial Port Profile (SPP)
- Provides transparent Serial cable replacement.
- Supports Baud Rate 1.2k to 921.6k bps.
- Easy to use Windows configuration tool available.
- Supports UART interface.
- Supports CTS/RTS hardware flow control.
- Customized features support for pairing mode, device name, PIN code.
- Supports Bluetooth SPP as a slave or a master.
- Supports Bluetooth Auto Reconnect.
- **Support OS: Win 98/ ME/ 2000/ XP/ Vista/ Win 7, Win CE, Linux, MAC OS**

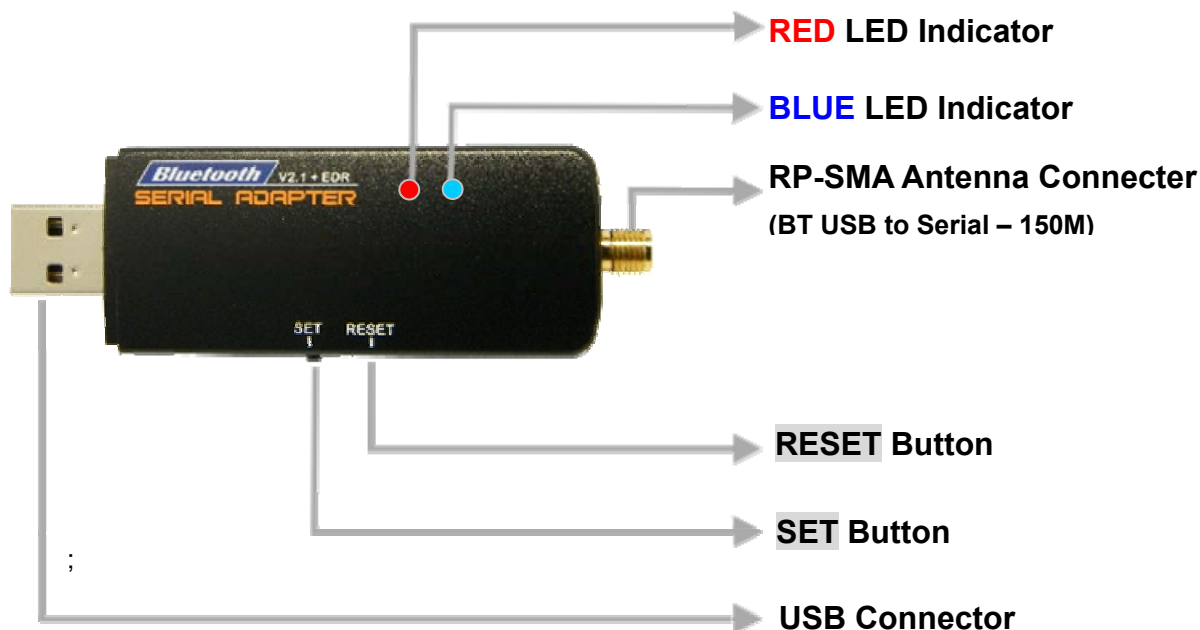
■ Application



■ Specification

Model Name	Bluetooth USB to RS-232/422/485 Serial Adapter	
Bluetooth Profile	Series Port Profile (Bluetooth SPP)	
Standard	Bluetooth specification version 2.1+EDR	
Frequency	2.402GHz ~ 2.480GHz unlicensed ISM band	
Hopping	1,600/sec, 1 MHz channel space	
Modulation Method	GFSK for 1Mbps; $\pi/4$ -DQPSK for 2Mbps; 8-DPSK for 3Mbps	
Transfer rates (Max)	Max UART baud rates of 3Mbps	
Spread Spectrum	Frequency Hopping Spread Spectrum (FHSS)	
Interface	USB 2.0 (Type-A Male)	
Transfer Baud Rate	Supports 1.2/2.4/4.8/9.6/19.2/38.4/57.6/115.2/230.4/460.8/921.6kbps	
Flow Control	CTS / RTS	
Data Bit	8	
Stop Bit	1 , 2	
Parity	None, Odd, Even	
RF Output Power	Class 1	
Tx Power	Max.18 +/-2 dBm	
Rx Sensitivity	-80 dBm typical	
Antenna	PCB Antenna	5dBi RP-SMA Antenna
Coverage	Up to 150 meter	Up to 500 meter
Current Consumption	Max. 90 mA	Max. 95 mA
Input Power	5V DC	
Operating Temperature	0 ~ +60°C	
Storage Temperature	-10 ~ +70°C	
Dimensions	78 x 31 x 12.5mm (without antenna)	
Operation System	Win 98/ ME/ 2000/ XP/ Vista/ Win 7, Win CE, Linux, MAC OS	

■ Hardware Guide



➤ LED Indicators

LED Name	LED Color	Situation	Function
Link	Blue	Fast Flashing	Search Mode: Device is searching other available devices to pair.
		Slow Flashing	Waiting Mode: Device is waiting to be connected.
		Everlasting Bright	Connected Mode: Device has paired and connected successful.
Setting	Red & Blue	Flashing alternatively	Setting Mode: Device is in the Setting Mode.

➤ Button Function

Button Name	Function
SET	Turn off power then persist to press "SET" button until power is applied to device when Red and Blue LED begin flash alternatively , please take off your hand from SET button then device is into Setting Mode .
RESET	When power on, persist to press "RESET" button for 3 seconds then LED Red and Blue will be fast flashing simultaneously for 3 times, then device is recovered to factory default .

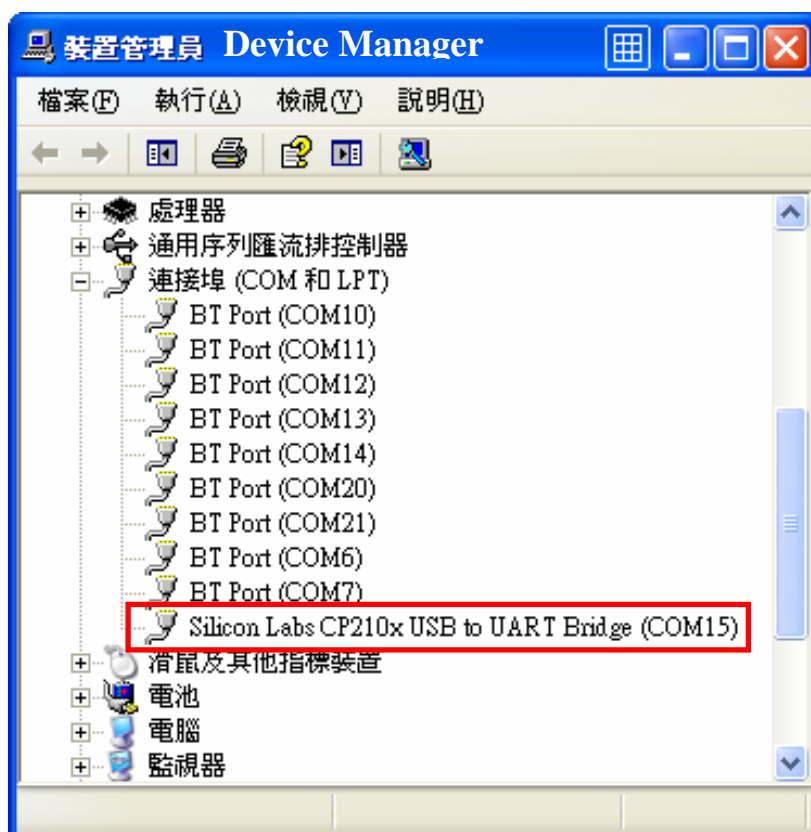
■ Factory Default Value

- Default Device name : **Serial Adapter**
- Default Password : **0000**
- Default Role : **Slave Mode**
- Default RS-232 Parameters : **115200, 8, n, 1**

■ USB Driver Installation

※ **Note:** Please don't insert the Bluetooth USB to Serial Adapter into the USB port of PC before USB driver is installed successful.

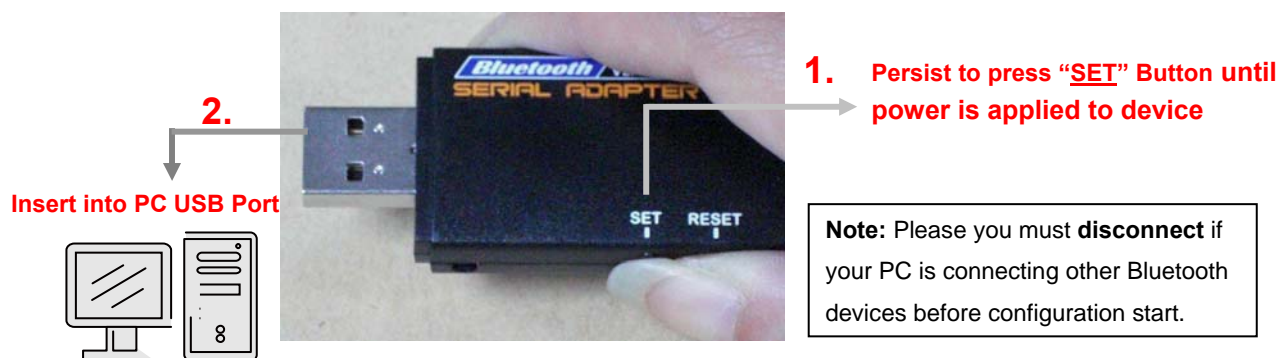
1. Insert the **Device Software CD** into your CD-ROM then select the driver to install as your computer system request.
2. After finished install driver on your system, please plug the Bluetooth USB to Serial Adapter into the USB port of your PC or Laptop.
3. You will find out a new virtual COM port – **Silicon Labs CP210x to UART Bridge** in Device Manager, if driver has been installed successful.



■ Configuration

➤ Launch Serial Adapter Utility

1. Persist to Press “**SET**” button then **insert** Bluetooth USB to Serial Adapter into a USB Port of PC until power is applied to device and the **Red** and **Blue** LED begin **flash alternatively**, please take off your hand from SET button then device is into **Setting Mode**.



2. Launch Serial Adapter Utility – **Device_Configure_v4.0B** on PC

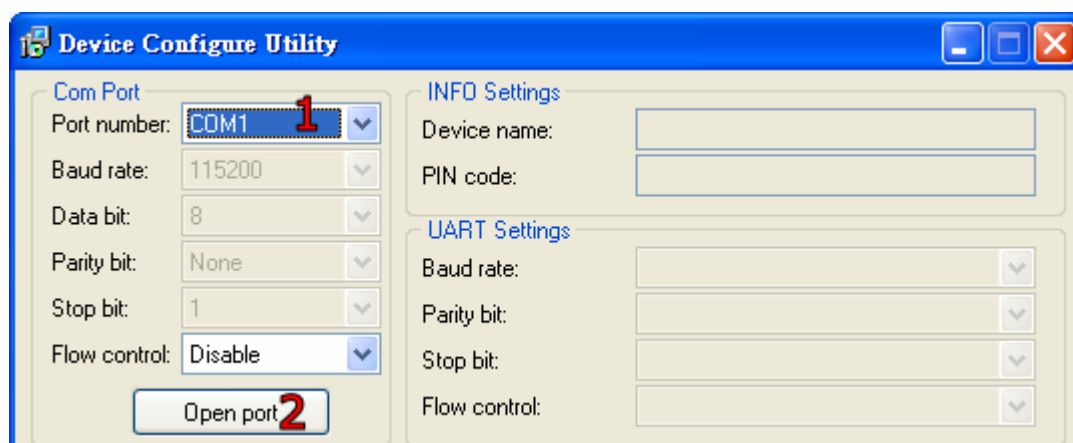


Device-Configure_v4.0B

3. Open COM Port - (1) Select COM Port Number to be same as **Virtual COM port** number.

※ Please refer the picture in page 7.

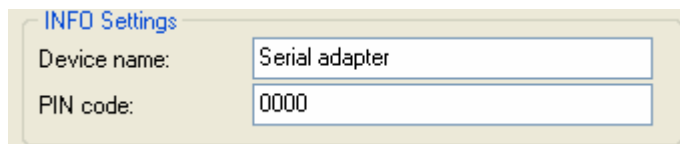
- (2) Press “**Open port**” Button



➤ Serial Parameters Setting

1. INFO Setting

Configure **Device name** & **PIN Code** setting.



INFO Settings

Device name: Serial adapter

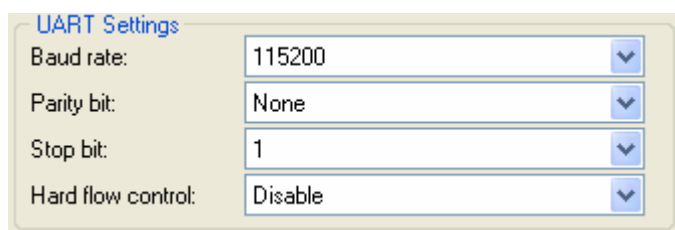
PIN code: 0000

** Default Device name: **Serial Adapter** **

** Default PIN Code: **0000** **

2. UART Setting

Configure **Baud rate**, **Parity bit**, **Stop bit** and **Hard flow control** setting.



UART Settings

Baud rate: 115200

Parity bit: None

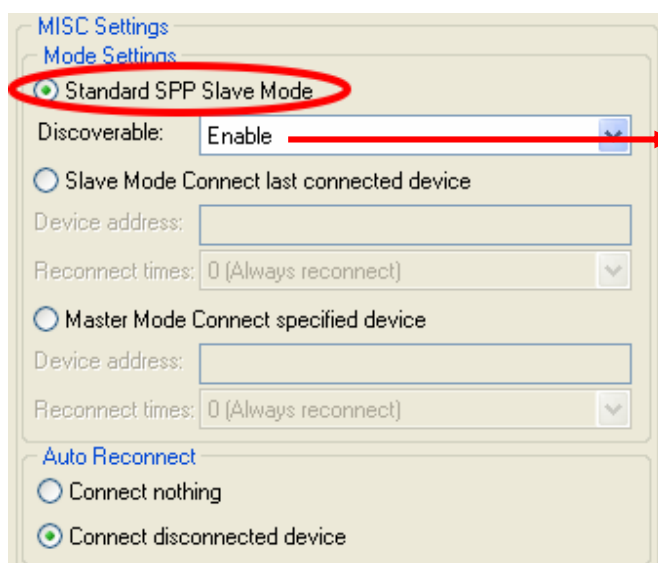
Stop bit: 1

Hard flow control: Disable

3. Mode Setting

3-1. Standard SPP Slave Mode: It's applied to passive connecting mode.

Bluetooth Serial Adapter is waiting to be connected with other devices such as PC, PDA or.....



MISC Settings

Mode Settings

☒ Standard SPP Slave Mode

Discoverable: Enable

☐ Slave Mode Connect last connected device

Device address:

Reconnect times: 0 (Always reconnect)

☐ Master Mode Connect specified device

Device address:

Reconnect times: 0 (Always reconnect)

Auto Reconnect

☐ Connect nothing

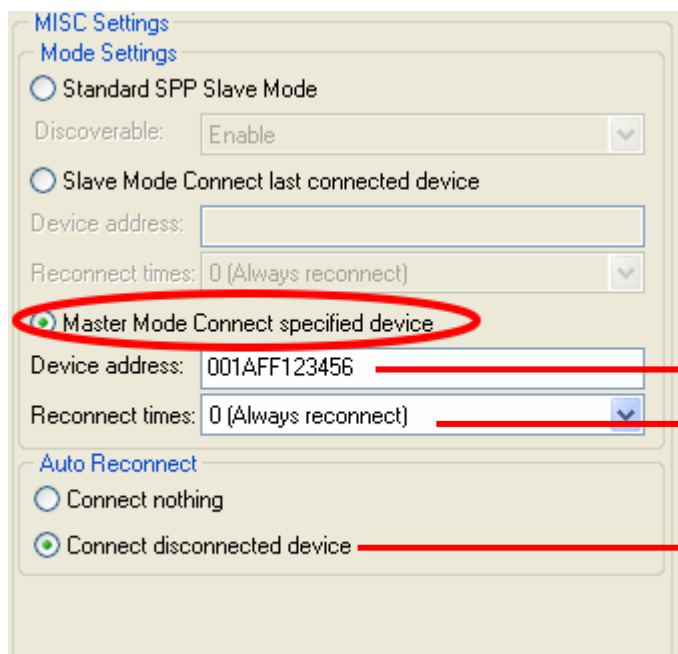
☒ Connect disconnected device

**** Discoverable:**

- (1) Select **Enable** to show device name.
- (2) Select **Disable** to hid device name

3-2. Master Mode Connect Specified Device: It's applied to active connecting mode.

You must enter Bluetooth MAC address of the remote Bluetooth device and you can setup **auto reconnect** times.



The screenshot shows the 'MISC Settings' window with the 'Mode Settings' tab selected. The 'Master Mode Connect specified device' option is selected and circled in red. The 'Device address' field contains '001AFF123456' and the 'Reconnect times' dropdown is set to '0 (Always reconnect)'. Red arrows point from these fields to callout boxes on the right. The 'Auto Reconnect' section at the bottom has 'Connect disconnected device' selected.

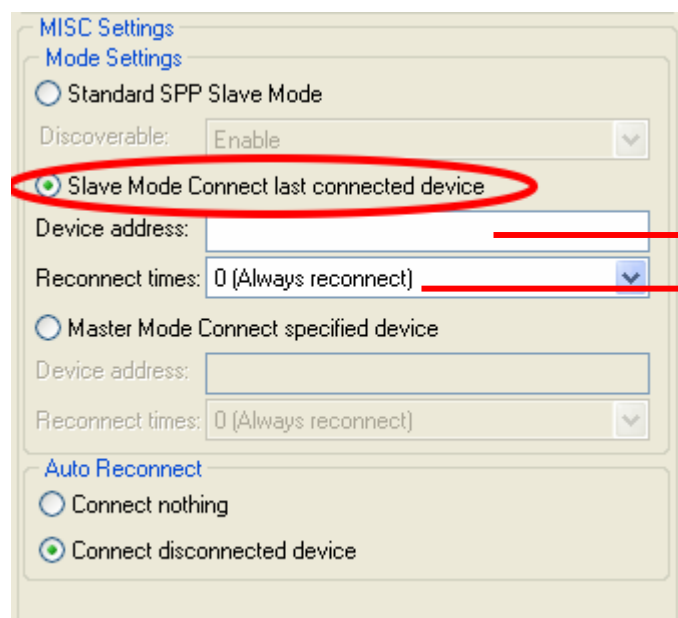
Enter **MAC Address** of Remote Bluetooth Device.

Setup **Auto Reconnect** times.

** Suggest you to setup **Auto Reconnect** to **“Connect disconnected device.”**

3-3. Slave Mode Connect Last Connected Device

It's applied to active auto reconnect last connected device and setup the auto reconnect times.



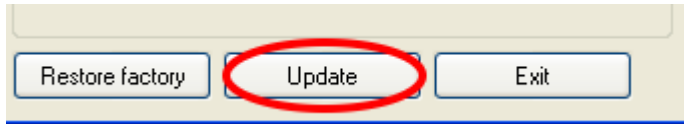
The screenshot shows the 'MISC Settings' window with the 'Mode Settings' tab selected. The 'Slave Mode Connect last connected device' option is selected and circled in red. The 'Device address' field is empty and the 'Reconnect times' dropdown is set to '0 (Always reconnect)'. Red arrows point from these fields to callout boxes on the right. The 'Auto Reconnect' section at the bottom has 'Connect disconnected device' selected.

At this mode, Bluetooth Serial Adapter will auto memorize the **MAC Address** of last connected device.

Setup **Auto Reconnect** times.

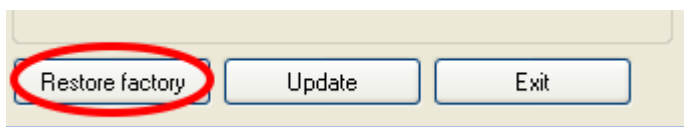
➤ **Save Setting**

Press **Update** button to save your new configuration then **turn off** the power of Bluetooth Serial Adapter then turn it on, after then the Bluetooth Serial Adapter will work with your new configure Serial parameter.



➤ **Restore Factory Default**

Press **Restore factory** button to recover parameter to factory default then **turn off** the power of Bluetooth Serial Adapter then turn it on, after then Bluetooth Serial Adapter default will recover to factory default.



** Default Device Name: **Serial Adapter**
** Default PIN Code: **0000**
** Default RS-232 Parameters: **115200, 8, n, 1**

➤ **Hardware Restore Factory Default**

1. Turn on power.
2. Please persist to press "RESET" button for **3 seconds** then LED **Red** and **Blue** will be fast flashing simultaneously for 3 times, then device is **recovered** to **factory default**.

➤ Quick Pairing Mode

This function is only able to apply with our Bluetooth Serial Adapter products connecting.

◆BT USB to Serial connect to : **BT to RS-232** or **BT to RS-422/485** or **BT USB to Serial**

Connect power into two Bluetooth to Serial Adapters then Blue LED will be Slow Flashing.

※ You can configure Serial parameters as your need before connect power

1. Select one of two Bluetooth to Serial Adapter to **double click** "SET" button then LED Red and Blue will be **slow flashing simultaneously** for **2 seconds** after then become LED Blue **fast flashing**, when LED Blue is fast flashing the Bluetooth Serial Adapter is in **search mode**.
2. When LED Blue is **everlasting bright**, the two Bluetooth to Serial Adapters had paired and connected successful. The Bluetooth to Serial Adapter you selected to double click SET button that is Master mode and another is Slave mode, the two Bluetooth to Serial Adapters that had paired and connected will Auto-Reconnect when you reboot devices.
3. If setting fail, please press "RESET" button to recover factory default then re-setting.

■ Warranty Policy

1. This device is guaranteed against manufacturing defects for one full year from the original date of purchase.
2. This warranty is valid at the time of purchase and is non-transferable.
3. This warranty must be presented to the service facility before any repair can be made.
4. Sales slip or other authentic evidence is required to validate warranty.
5. Damage caused by accident, misuse, abuse, improper storage, and/or uncertified repairs is not covered by this warranty.
6. All mail or transportation costs including insurance are at the expense of the owner.
7. Do not send any product to service center for warranty without a RMA (Return Merchandise Authorization) and proof of purchase. Ensure a trackable method of delivery is used (keep tracking number).
8. Warranty is valid only in the country of purchase.
9. We assume no liability that may result directly or indirectly from the use or misuse of these products.
10. **This warranty will be voided if the device is tampered with, improperly serviced, or the security seals are broken or removed".**